

Amendments to the Specification:

Please replace the original paragraph [0007] with the following amended paragraph:

[0007] In accordance with this invention, a power steering pump comprises a housing defining a bore having an axis, a fluid discharge port communicating with the bore at a first axial location, and fluid bypass port communicating with the bore at a second axial location. A flow control valve is slideably received in the bore and regulates the inlet for admitting fluid to the fluid bypass port. In accordance with this invention, electrical means are provided for sliding the flow control valve to vary the size of the inlet to the fluid discharge port and thereby [increases] increase or decrease fluid flow to the fluid bypass port, to adjust the output from the pump.

Please replace the original paragraph [0012] with the following amended paragraph:

[0012] In accordance with a preferred embodiment of this invention, referring to Fig. 1 and 2, there is depicted a power steering pump 10 for supplying pressurized fluid for a power steering system of an automotive vehicle. Pump 10 comprises a housing 12, preferably formed of aluminum alloy. Housing 12 contains pumping element, showing schematically, that [include] includes a rotor 14 that propels retractable vane 16 within a cam chamber 18. Housing 12 defines a fluid discharge port 20 that carries fluid under pressure from cam chamber 18, as indicated by arrow 22. The housing also defines a suction passage, indicated by arrow 24, for delivering fluid to cam chamber 18. During operation, rotor 14 is driven by the automotive engine via a belt and pulley arrangement. Fluid is pumped under pressure to discharge port 20 and [exists] exits through an outlet 27 in adapter 26, as output 28. Adapter 26 is connected through tubing to a rotary valve and steering gear of the power steering system. Fluid is returned to the pump through a return line (not shown) connected to suction passage 24 and is, in turn, drawn into cam chamber 18.

Please replace the original paragraph [0014] with the following amended paragraph:

[0014] Fluid to bypass port 30 is controlled by a flow control valve assembly that includes a flow control valve 38 slideably received in sleeve 40 inserted in bore 34. Sleeve 40 comprises openings 42 and a circumferential groove 44 in fluid communication with fluid discharge port 20 and also comprises openings 46 and circumferential groove 48 in fluid communication with fluid bypass port 30. Valve 38 comprises openings 52 and circumferential groove 54 that communicate with openings 42 in sleeve 40[, and] . Valve 38 also includes openings 56 and a circumferential groove 58 adapted for communicating with openings 46 in sleeve 40. A central axial fluid passage 50 communicates with outlet passages 27. Valve 38 slides between a fully open position depicted in Fig. 1 and a closed position depicted in Fig. 2. During operation, fluid from fluid discharge port 20 is distributed by grooves 44 to flow through openings 42 into groove 54 and through opening 52 into central passage 50, and from central passage 50 through outlet 27. It is pointed out that groove 54 is axially widened, and that valve 38 includes multiple openings 52 that are axially spaced to provide continuous fluid communication between fluid discharge port 20 and central passage 50 despite movement of valve 38 between the fully open and closed positions. Moreover, during operation, when valve 38 is open, for example, in the fully open position depicted in Fig. 1, fluid flows from central passage 50 through openings 46 and groove 58 of valve 38, and thereafter through openings 56 and groove 48 to bypass port 30. This permits an excess portion of the pumped fluid to be recycled through bypass port 30 to control the output from the pump. In the closed position shown in Fig. 2, valve 38 slides to axially displace openings 56 relative to openings 46 in sleeve 40, where the circumferential surface of valve 38 closes the openings 46 in sleeve 40 to prevent fluid flow to bypass port 30. Thus, in this embodiment, openings 46 and 56 cooperate to define the inlet to fluid bypass port 30. It is an advantage of this invention that the position of valve 38 maybe varied between the fully open and the closed position to vary the size of the inlet to increase or decrease fluid flow to the fluid bypass port and thereby decrease or increase, respectively, the volume of pump output 28.

Please replace the original paragraph [0016] with the following amended paragraph:

[0016] In the depicted embodiment, prior to operation, valve 38 is biased in the fully open position shown in Fig. 1 by coil spring 70. In the fully open position depicted in Fig. 1, pumped fluid from the pumping elements, including rotors 14, vanes 26 and cam chamber 18, deliver pumped fluid to fluid discharge port 20. The pumped fluid flows through openings 42 in sleeve 40 and openings 52 in valve 38 into central passage 50. A portion of the fluid flows through central passage 50, [and] extension 64 and outlet 27 to provide the output 28 for the pump. Excess fluid flows from passage 50 through the inlet formed by openings 56 in valve 38 and openings 46 in sleeve 40 into bypass port 30 and are combined with returning fluid 24, thereby recycling the fluid within the pump.

Please replace the original paragraph [0018] with the following amended paragraph:

[0018] It is an advantage of this invention that the position of valve 38 may be adjusted to vary the size of the inlet to the bypass port and thereby control the pump output 28 to optimize performance to the power steering system for particular driving conditions. By way of example, an optimum pump output may be determined based upon vehicle speed, steering wheel rate, and fluid pressure within the power steering system. For this purpose, a control module may be provided for regulating current to electromagnetic coil 62. The control module receives input, for example, for vehicle speed and steering signals, and determines an optimum system pressure or fluid volume using a look-up table or algorithm. The control module then regulates current to the electromagnetic coil 62 to adjust the position of the flow control valve. In this manner, the flow control valve may be moved to increase or decrease the size of the inlet to the bypass port and so increase or decrease the proportion of pumped fluid. Opening the valve increases the flow of fluid through the bypass port and decreases output 28, whereas closing the valve decreases flow to the bypass port and increases output 28. By making appropriate adjustments to the position of the flow control valve and thus to the size of the inlet to the fluid bypass port, an optimum output may be obtained for particular driving conditions.